CLAIM AMENDMENTS

1. – 53. (Canceled)

54. (Previously Presented) A commercial kit for impairing a cell comprising:

a vector containing an isolated nucleotide sequence encoding an amino acid sequence comprising residues 1-239 of SEQ ID NO: 2; and

instructions for use.

55. (Canceled)

56. (Previously Presented) A commercial kit for impairing a cell comprising:

a recombinant virus containing an isolated nucleotide sequence encoding a mutant *E. coli* purine nucleoside phosphorylase protein comprising residues 1-239 of SEQ ID NO: 2; and instructions for use.

57. (New) An isolated nucleotide sequence comprising a coding sequence for a full-length mutant E. coli purine nucleoside phosphorylase having an amino acid substitution mutation selected from the group consisting of: M65V, A157L, A157V, E180D, M65A and D205N, the mutant E. coli purine nucleoside phosphorylase having different biological activity than a wild type microbial purine nucleoside phosphorylase.

58. (New) The nucleotide sequence of claim 57 wherein said coding sequence is for a mutant *E. coli* purine nucleoside phosphorylase containing a complete open reading frame and encodes an amino acid sequence comprising residues 1-239 of SEQ ID NO: 2.

59. (New) The nucleotide sequence of claim 57 wherein said nucleotide sequence comprises residues 1-720 of SEQ ID NO: 1.

60. (New) The nucleotide sequence of claim 57 wherein said coding sequence is for a mutant *E. coli* purine nucleoside phosphorylase containing a complete open reading frame and encodes an amino acid sequence comprising residues 1-239 of SEQ ID NO: 4.

61. (New) The nucleotide sequence of claim 57 wherein said nucleotide sequence comprises residues 1-720 of SEQ ID NO: 3.

62. (New) A vector comprising the nucleotide sequence of claim 57.

63. (New) A host cell transformed with a vector comprising an isolated nucleotide sequence encoding a full-length mutant of claim 57.

64. (New) A recombinant virus which is capable of transferring a gene to a target cell and which comprises the nucleotide sequence of claim 57.

65. (New) A host cell transformed with the virus of claim 64.